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of the pronoun of the first person *ani*, literally ‘my person.’ In this instance the noun has a masculine form. More frequently however, the *t* of the feminine gender is added, and also the *u* which forms the nominative case in Assyrian. Of this nature are the Assyrian *áttua* for *ántua*, and the plural *áttunú*; and also the Coptic *antok*, *antov*, *antos*, *antóten*, &c.

“The form *anakhnu* is supposed to consist of the verbal root, a noun, and the possessive affix for ‘our.’ It is literally ‘Here is our company.’

“The pronouns of the third person are used also for the remote demonstrative; the person spoken of being supposed to be away, while the speaker and the person spoken to are present to one another. The Assyrian forms of these pronouns resemble the Gothic and Sanskrit, as the Hebrew and Arabic forms resemble the Greek and the Zend.

“It is observed that the Assyrian pronouns *anáku* and *attá* have the precise forms of the corresponding persons of a tense of the verb, which denotes state, or permanent or habitual action. The forms of this tense belonging to the third person, on the contrary, do not terminate with the pronouns of that person, or in the same manner with them.”

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The Rev. Chas. Graves, D. D., read a paper on the principles which regulate the interchange of symbols in certain symbolic equations.

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Sir W. R. Hamilton read a paper on some extensions of quaternions :—

“Besides some general remarks on associative polynomes, and on some extensions of the modular property, Sir W. R. Hamilton remarked that if, in the quadriminomial expression

$$Q = w + \iota x + \kappa y + \lambda z,$$

the laws of the symbols  $\iota\kappa\lambda$  be determined by the following formula of vector-multiplication,

$$\begin{aligned}
 \text{(A)} \dots (\iota x + \kappa y + \lambda z) (\iota x' + \kappa y' + \lambda z') = \\
 (m_1^2 - l_2 l_3) xx' + (l_1 m_1 - m_2 m_3) (yz' + zy') \\
 + (m_2^2 - l_3 l_1) yy' + (l_2 m_2 - m_3 m_1) (zx' + xz') \\
 + (m_3^2 - l_1 l_2) zz' + (l_3 m_3 - m_1 m_2) (xy' + yx') \\
 + (\iota l_1 + \kappa m_3 + \lambda m_2) (yz' - zy') \\
 + (\kappa l_2 + \lambda m_1 + \iota m_3) (zx' - xz') \\
 + (\lambda l_3 + \iota m_2 + \kappa m_1) (xy' - yx'),
 \end{aligned}$$

then this expression, which he proposes to call a **QUADRINOME**, has many properties (associative, modular, and others), analogous to the quaternions; which latter are indeed only that *case* of such quadrinomes, for which,

$$\begin{aligned}
 l_1 = l_2 = l_3 = 1, \\
 m_1 = m_2 = m_3 = 0, \\
 \iota = i, \kappa = j, \lambda = k.
 \end{aligned}$$

He has, however, found another distinct sort of associative quadrinomial expression, which has also several analogous properties, and for which he suggests the name of **TETRADES**; the product of two vectors being in it,

$$\begin{aligned}
 \text{(B)} \dots (lx + my + nz) (lx' + my' + nz') \\
 + (\kappa n - \lambda m) (yz' - zy') + (\lambda l - \iota n) (zx' - xz') \\
 + (\iota m - \kappa l) (xy' - yx').
 \end{aligned}$$

Dr. Allman communicated the results of some observations he had just made on *Aphanizomenon Flos-aquæ*. This minute alga had begun about three weeks previously to make its appearance in great abundance in the large pond of the Zoological Gardens. The best account we possess of the plant is in an excellent paper on the *Nostochineæ*, by Mr. Ralfs;\* but as the specimens from which Mr. Ralfs's description was drawn up were not in a recent state, some important points of structure have necessarily escaped him.

*A. Flos-aquæ* shows itself in the form of little fusiform fasci-

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\* On the *Nostochineæ*. By John Ralfs, M. R. C. S., Ann. and Mag. of Nat. Hist. May, 1850.